

STATE OF INDIANA
INDIANA UTILITY REGULATORY COMMISSION
**ADVANCED NOTICE OF PROPOSED RULEMAKING
ON DISTRIBUTED RESOURCES**

COMMENTS OF THE INDIANA MUNICIPAL POWER AGENCY

The Indiana Municipal Power Agency welcomes this opportunity to respond to the Commission's request for public comment on distributed resources. IMPA is a Joint Agency and a political subdivision of the State of Indiana established pursuant to Ind. Code § 8-1-2.2. All of IMPA's 32 members have entered into power supply agreements with IMPA, under the terms of which IMPA provides all of the members' electric power and energy requirements for their respective municipally-owned electric utilities.¹ IMPA has its principal office at 11610 North College Avenue, Carmel, Indiana 46032. IMPA is not a "public utility" as defined in Ind. Code § 8-1-2-1; however, the Commission has jurisdiction over certain matters relating to the approval of IMPA's participation in projects, the financing for such projects and the construction of generating facilities under Ind. Code § 8-1-2.2-19 and Ind. Code § 8-1-8.5. Fourteen of IMPA's members are subject to IURC rate jurisdiction.

IMPA experienced a peak demand of 905 megawatts in July 2001. To cover this member demand, IMPA has an ownership share of 156 MW in Gibson Unit 5 operated by Cinergy/PSI

¹ IMPA's members include the Cities and Towns of Advance, Anderson, Bainbridge, Bargersville, Centerville, Columbia City, Covington, Crawfordsville, Darlington, Edinburgh, Flora, Frankfort, Frankton, Greendale, Greenfield, Jamestown, Ladoga, Lawrenceburg, Leganon, Linton, Middletown, Paoli, Pendleton, Peru, Pittsboro, Rensselaer, Richmond, Rising Sun, Scottsburg, Tipton, Washington, and Waynetown, located in the State of Indiana.

Energy and an ownership share of approximately 64 MW in Trimble County Unit 1 operated by LG&E Energy/Louisville Gas & Electric. IMPA owns and operates four natural gas-fired, combustion turbines totaling 144 MW. Two turbines are located at IMPA's Anderson Station and two at IMPA's Richmond Station. IMPA also has available under capacity purchase agreements 155 MW of member-owned generation. IMPA purchases power for its remaining load from Cinergy/PSI, AEP, as well as other electric utilities and power marketers. The Commission recently issued its Order in Cause No. 42063, granting IMPA a Certificate of Public Convenience and Necessity for an additional combustion turbine(s) at IMPA's Anderson Station.

To best serve its members, IMPA's overall goal in power supply planning is to provide reliable, low cost and environmentally benign power to its members and their retail customers. To achieve this goal, IMPA takes a "portfolio" approach to power supply planning: IMPA seeks to diversify its power supply resources to include multiple individual plants, multiple power production technologies, diverse fuel types, and a combination of generating assets and purchased power contracts. Within its purchased power portfolio, IMPA includes long- and short-term purchases and multiple suppliers. This portfolio approach limits IMPA's exposure to risks such as unplanned outages and catastrophic failures of generating plants, fuel price spikes, strikes or other labor actions, or the failure or inability of a particular supplier to deliver contracted power. Clearly, IMPA's approach includes the review of distributed generation as a possible source of power supply.

IMPA's ongoing evaluation of distributed resources is appropriate and an integral part of IMPA's relationship with its members. The Commission's rules and regulations, which address cogeneration and alternate energy production facilities, provide that municipally-owned electric

utilities must purchase the energy generated by a qualifying facility connected to the utility's electric plant. 170 IAC 4-4.1-5(a). These regulations further provide that "[I]f a utility purchases all of its power from a single supplier, such that its avoided cost, as defined in this rule, is derived from the single supplier, the supplier may assume the obligation to purchase the energy and capacity offered by a qualifying facility." *Id.* Certain customers of IMPA's members are considering distributed generation. If these customers install such resources and these resources are qualified facilities, then, notwithstanding certain contractual concerns, IMPA would purchase the output from the members' customer resources.

IMPA provides the following comments to the questions posed by the Commission in its Advanced Notice of Proposed Rulemaking on Distributed Resources.

a. Please provide a definition of distributed generation, including engineering characteristics and unit size. Should the definition differ depending on the customer class?

IMPA defines Distributed Generation as generation of any type (*e.g.*, diesels, fuel cells, wind, etc.) and any use (*e.g.*, peaking or baseload) that is owned and operated by a retail customer (or the customer's designee) and that is interconnected with a distribution line, which typically operates at a voltage of 25 kV or lower. This level of interconnection limits the size to approximately 10 MW. The type of retail customer (*i.e.*, residential, commercial or industrial) does not affect this definition.

- b. Assuming net metering as the first step in a distributed generation rulemaking, what are the benefits for customers with net metering and what are the possible negative effects?**

The implementation of net metering of distributed generation installed within IMPA's member municipal electric system is limited given the contractual relationship that IMPA has with its 32 members. IMPA and each of its 32 members are parties to power sales agreements that require the member to purchase from IMPA all electric power and energy for the operation of the member's municipal electric system. This "all-requirements" provision is fundamental to IMPA's financing and reinforces IMPA's high bond ratings by Moody's, Standard & Poor, and Fitch. Should the Commission promulgate rules regulating distributed generation, IMPA and its member municipalities should be exempt from any net metering requirement. This regulatory approach has precedent in the Commission's rules at 170 IAC 4-4.1-5, which allows a power supplier to "step into the shoes" of its member municipality and assume the obligation to purchase the electric output of qualifying facilities.

IMPA is working with its members and their retail customers who may install distributed resources. If such distributed generating equipment is placed in service, IMPA intends to purchase all the output from such equipment; the municipal electric system would continue to supply retail electric service to the customer's premises. IMPA anticipates that none of these installations would be on a net-metered basis.

- c. What kind of tariff structure can be used to deal with different amounts and sizes of distributed generation and still make net metering practical?**

IMPA would not purchase the electric output from a distributed resource on a net meter basis as explained in IMPA's response to (b) above. IMPA proposes to purchase all the energy

generated by the distributed resource at a percentage of the market price for that hour. However, an independent source of such market pricing is not available. Until such an independent source is found, IMPA would use a percentage of the daily energy price published in widely circulated industry publications. The percentage IMPA applies to the hourly or daily market price reflects the “odd lot” nature of distributed generation and the fact that such generation is typically non-firm. A rate that is a percentage of market price reflects the increased administration, the higher replacement cost should the distributed resource not be available during peak hours, and the impact on the allocated customer cost, which may not be otherwise recovered.

These characteristics make distributed generation less valuable than 100 percent firm blocks of purchased power, which form the basis of published market energy prices. For smaller distribution generation, where the size of the generation does not justify the complexity of even daily pricing, IMPA has proposed to pay a flat energy rate for all energy from the facility. Absent net metering, IMPA’s members will continue to supply all the requirements of their retail customers under the appropriate retail tariff, without consideration of any generated energy provided to IMPA by the distributed resource.

d. How should a utility determine the fixed amount of cost per customer with net metering, for both a net buyer and/or net seller?

Since IMPA would not purchase the electric output from a distributed resource on a net meter basis, neither IMPA nor its members need to fix an amount of cost per customer.

- e. **How do tariffs need to be designed to adequately reflect the efficient recovery of the fixed and variable costs for service to customers that operate distributed generation equipment using a net meter?**

Since IMPA would not purchase the electric output from a distributed resource on a net meter basis, neither IMPA nor its members need to modify their rates for retail customers that operate distributed generation.

- f. **How can stranded costs be identified and measured?**

IMPA has not addressed the matters of stranded investment or stranded cost.

- g. **What, if any, are the benefits and revenues that should be considered as offsets to stranded costs?**

If the electric utility were released from the obligation to serve that portion of the customer's load supplied from distributed generation, the utility could serve future load growth with the released portion of its power supply resources and thereby defer the need for additional power supply resources. However, this value is dependent on the firmness or reliability of the distributed generation and the assurance that it will be available during peak load conditions.

Although IMPA does not operate a distribution system, IMPA anticipates the major benefit of distributed generation would be the support such resources could provide to a weak portion of the distribution system. However, this is unlikely to occur on a municipal electric system since it serves a higher density of retail customers and, thus, the municipality recognizes a greater need to adequately maintain its system to ensure a high quality of service.

h. What rate design alternatives would reduce the potential for any stranded costs?

IMPA's procedures separating IMPA's purchase of energy from the distributed resource from IMPA's members' retail service to customers with installed distributed generation, reduces the potential for stranded costs. Such costs are obviated by the separation of the two transactions, *i.e.*, the "buy" and the "sell," and reliance on separate cost bases.

i. Should standby rates for backup power be used, and if so, under what criteria?

If a retail customer with distributed generation desires backup power, there should be a minimum payment to cover the Customer and Demand allocations identified in the cost of service. Absent net metering, the existing retail tariff provides the minimum charge needed to recover these allocated costs.

j. What different kinds of standby services do customers with Distributed Generation require and can the utility reasonably supply?

Standby services have not been an issue in IMPA's experience with separate buy and sell transactions. IMPA's members provide normal auxiliary and startup services under existing tariffs. IMPA's members provide these services easily at a normal secondary voltage; service at a higher voltage can be costly.

k. In order to determine the necessity and proper design of standby rates, we need further information on distribution system design, operations, and cost structure. Please provide any information that might help to develop efficient standby rates.

Focused on wholesale power supply, IMPA does not have details on distribution systems.

l. Are there areas in Indiana with distribution constraints?

IMPA has no knowledge of distribution constraints. However, distributed generation could create distribution constraints if the customer generates from its distributed resource more kilowatts than the distribution lines were originally designed to or can safely carry.

m. Should utilities be required to file a location-specific set of T&D costs?

IMPA does not have the appropriate data to develop location-specific T&D costs. However, voltage-specific costs may be more appropriate.

n. What constitutes an economically efficient buy-back rate?

A percentage of the hourly market energy rate is appropriate for purchases from a customer with distributed generation. This rate provides the customer the best price signal for the over- or under-supply of energy in the market each hour. A percentage of the hourly market rate is also appropriate for IMPA to pay since distributed generation is a low-cost power supply source when the market price is lower than the cost of IMPA's long-term (*e.g.*, baseload) resources. When the market rate is high, energy from distributed generation will offset IMPA's other resources, which could then sell the uncommitted energy into the market. In both situations, IMPA and the retail customer with distributed generation benefit.

o. What information should be included in a utility standard application form for Distributed Generation?

IMPA needs the following information to evaluate distributed generation:

- Location
- Type of distributed resource (*e.g.*, diesel, micro-turbine, fuel cell)

- Output (both maximum kW and monthly kWh)
- Mode of operation (*e.g.*, baseload, intermittent)
- Protective devices
- Meters to provide hourly output in electronic form
- Transducers to provide a signal for IMPA's SCADA system
- Date of initial operation and expected term of operation
- Ramp rate
- Starting time (time from start-up to synchronization)

IMPA anticipates its members, as operators of distribution systems, would need the following additional information:

- Location on the distribution system.
- Electrical characteristics (*e.g.*, voltage, power factor, harmonics, short circuit current)
- Scheme for protection against backfeed into a black system

p. What costs are incurred by a utility to review a distributed generation project?

IMPA typically incurs several days of staff time to review the anticipated distributed generation concept, to provide sample economic analyses illustrating IMPA's proposed level of payments, to study and analyze distribution load flows and fault currents, and to establish a contract for the transaction.

q. Do these costs vary for different distributed generation project proposals?

While IMPA has incurred the same type of costs related to various distributed generation projects, the magnitude has varied with the depth of involvement and analysis required. In general, larger projects require more coordination and analysis.

r. How long should it take a utility to evaluate a project?

IMPA is responsible to its members, who are also IMPA's owners, and responsive to their retail customers. Depending on the project, different and cumulative review may be warranted. For example, some projects can be screened for feasibility; this screen may be quickly turned around. If feasible, a more detailed study would begin. Other projects may require evaluation relying on expertise not available in-house. Finally, agreement with the study's conclusion and negotiation of operating terms and conditions may be necessary. Screening may take a month; detailed analyses will vary with the project's complexity. In promulgating distributed generation requirements, the Commission could consider limiting the time needed to screen the project and responding initially to the customer seeking to install a distributed resource, but subsequent time for detailed study should be a matter for agreement between IMPA and the customer.

s. What are the criteria a utility should use to evaluate a Distributed Generation project?

IMPA uses the following criteria to evaluate a distributed generation project:

- The project will have no adverse impact on IMPA's wholesale rate to its members
- The project will have no adverse impact on the existing network of generators and transmission facilities

IMPA anticipates its members would use criteria similar to the following when evaluating a prospective distributed generation project:

- The project will have no adverse impact on retail rates
- The project will have no adverse impact on the distribution system and/or other retail customers' use of electricity
- The project will have no adverse impact on the distribution system and equipment reliability

Respectfully submitted,

/s/ Gayle Mayo

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